

ChemRisk/Shonka Research Associates, Inc., Document Request Form

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2478

(This section to be completed by subcontractor requesting document)

TIMOTHY BENNETT 1 1034A
Requestor

Document Center (Is requested to provide the following document)

Date of request 10/12/95 Expected receipt of document 1 month

Document number KP-94 Date of document 12/22/99

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Date submitted to ChemRisk/Shonka and DOE 1/16/96

(This section to be completed by ChemRisk/Shonka Research Associates, Inc.)

Date document received

Signature

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INTER-COMPANY CORRESPONDENCE

(SECRET NAME)

COMPANY CARBIDE AND CARBON CHEMICALS CORP. LOCATION

Post Office Box P
OAK RIDGE, TENN.TO Mr. J. R. Largey
LOCATION K-1029

DATE December 22, 1949

ATTENTION
COPY TOF. H. Anderson
J. L. Clark
J. P. Murray
H. M. Preuss
M. F. Schwenn

PLANT RECORDS DEPT.
CENTRAL FILES
REC. <u>C24615</u>
FILE _____
X-REF _____
X-RFP _____

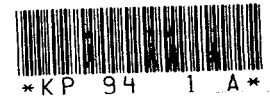
ANSWERING LETTER DATE

SUBJECT Material Loss at K-631

UNCLASSIFIED

KP-94

KP 94 1 A



Date of Release
Location of Release
Material
Amount of Material
Class or Assay of Material
Equipment Involved
Source of Information

December 20, 1949
K-631

UF₆
20.6 lbs. (24,273 Kg. T, 47,330 Gm. X)
Waste Concentration
Worthington Compressor (Seal Chamber)
J. L. Clark, G. V. Larmoyeux,
Operator Green

Details: When opened, the compressor was found to contain a layer of material about 2 inches deep at the bottom of the horizontally mounted cylindric seal chamber. This cylinder is about 12 inches long and 8 inches in diameter (inside dimensions). The volume occupied by the solidified material (assumed to be UF₆) was calculated to be 122 cubic inches or .0706 cubic feet. Using a density of 292 pounds per cubic foot for the solid material this calculated to be 20.6 pounds of UF₆ which converts to 24,273 coded Kg. T and 47,330 coded grams of X.

To prevent recurrence an automatic seal feed and exhaust is being incorporated with the seal chamber; the chamber is also being calroded.

~~CAUTION~~

This document contains information affecting the National Defense of the United States. Its transmission or the disclosure of its contents in any manner to an unauthorized person is prohibited and may result in severe criminal penalties under applicable Federal laws.

Approved:

F. Strang
F. Strang

J. R. Largey
J. R. Largey

This document has been approved for release to the public by:

Photo for ASDist 1/9/96
Technical Information Officer
Oak Ridge K-25 Site /VTM

~~SECRET~~

UNCLASSIFIED

Classification changed to: Unclassified
(level and category)

By authority of: CGP RGD-4
(classification guide)

Plu/K 23 June 94
Date
ADD or ADD signature (first reviewer)
Sam W. Wohlfort 6/28/94
Date

ADD signature (final reviewer) OK
Date
TWIS 7/25/95

Carbide and Carbon Chemicals Corporation Operating
Contractor for the U.S. Atomic Energy Commission.

ChemRisk/Shonka Research Associates, Inc., Document Request Form

2479

(This section to be completed by subcontractor requesting document)

Requestor TIMOTHY BENNETT / 1034A Document Center (is requested to provide the following document)

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(This section to be completed by ChemRisk/Shonka Research Associates, Inc.)

Date document received

Signature

(**SECRET**)
(**NAME**)

Post Office Box P
OAK RIDGE, TENN.

ANSWERING LETTER DATE

Code Number: KP-90

UNCLASSIFIED

November 1, 1949
K-1405
UF₆
60 pounds (299503 Kg.
Feed Concentration
UF₄ Conversion Equipment
D. C. Brater

Details:

In converting UF₄ to UF₆ the material short circuited the cold traps used to condense out the UF₆. The material passed into the lines from the trap to the tower. These lines consist of about 80 feet of 1½ inch piping expanding into 50 feet of 4 inch pipe. This pipe tees into a 4 inch tower about 50 feet high, open to the atmosphere.

There were traces of material about the open end of the tower, some "smoke" was also observed coming from the tower at the time of the misoperation.

Unless the material reacted in the piping it would probably be lost in subsequent operations. The UF₆ was diluted with nitrogen and the piping has shown no sign of plugging.

The facts indicate that some material was lost and since we cannot prove definitely that the material is located in the piping without dismantling the equipment, we have no alternative but to write the 60 pounds of UF₆ off as a known loss.

Date _____

ADD signature (final reviewer)

THIS FORM FOR INTER-COMPANY CORRESPONDENCE ONLY

Carbide and Carbon Chemicals Corporation Operating Contractor for the U.S. Atomic Energy Commission.

UNCLASSIFIED

It is recommended that at the first available opportunity the piping be decontaminated and the recovered material "counted".

The 60 pound UF_6 figure is the theoretical weight of UF_6 which would have been collected from the conversion of the UF_4 charge.

F. Strang
F. Strang

Approved:

J. R. Largey
J. R. Largey

FS/mf

SECRET

ChemRisk/Shonka Research Associates, Inc., Document Request Form

2477

(This section to be completed by subcontractor requesting document)

TIMOTHY BENNETT / 1034A

Requestor

Document Center (is requested to provide the following document)

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Date document received

Signature

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This document consists of 1 pages
of 6 copies. Series A

INTER-COMPANY CORRESPONDENCE

Post Office Box P
OAK RIDGE, TENN.

(INSERT NAME)

COMPANY CARBIDE AND CARBON CHEMICALS CORP. LOCATION

TO
LOCATION

Mr. J. R. Largey
K-1029

DATE January 5, 1950

ANSWERING LETTER DATE

ATTENTION
COPY TO

Mr. F. H. Anderson
J. L. Clark
J. P. Murray
H. M. Preuss
M. F. Schwenn

SUBJECT Material Escape at K-631

KO-97

UNCLASSIFIED

Carbide and Carbon Chemicals Corporation Operating
Contractor for the U.S. Atomic Energy Commission.

Date of

Found December 30, 1949 @ 3:15 P.M.

Location of

K-631

Material

Assumed to be UF₆

Amount of Material

25.5 lbs. (23,552 Kgt. 57,230 gm. X)

Class or Assay of Material

Waste Concentration

Equipment Involved

"A". Accumulator pipe housing

Source of Information

J. L. Clark, G. V. Larmoyeux,
S. Gains

Investigated by

S. J. Zangri

Details: A yellowish coloration about the edges of the manhole cover prompted operating personnel at K-631 to remove the manhole cover to the "A" Accumulator pipe housing. The housing floor and piping was coated with condensed UF₆, the layer being estimated at 1/32 to 1/16 inches thick.

The release was due to a bellows rupture in a 1½" SMP valve. This valve is used once a day to evacuate the lines into the surge drums. The length of time this condition prevailed can not be determined.

From the measured area of the housing the density of condensed UF₆ (corrected) and the thickness of the deposit a weight of 25.5 lbs. of UF₆ was calculated as being present in the housing. This material will be recovered by the decontamination process, however there is no doubt that some small undetermined loss of material to the atmosphere has resulted from this material escape. Under the circumstances surrounding this incident it is not possible to evaluate this loss.

~~RESTRICTED DATA~~

This document contains restricted data as defined in the Atomic Energy Act of 1946.

Approved:

~~SECRET~~

FS/vrm

F. Strang
F. Strang
J. R. Largey
J. R. Largey

KP 97 1 A

KP 97 1 A